be considered as a ground for the Commission's rejection of SWBT's Section 271 application and its SGAT.

8. I conclude that SWBT's proposed OSS interfaces are not yet operationally ready to support local service market entry at reasonable volume levels such as those planned by AT&T and, presumably, other CLECs who would intend to meaningfully compete with SWBT. *First*, SWBT has not made available any interface or interface specifications that would make it feasible for AT&T to offer local service by means of all of the approved unbundled network elements, including a platform of elements. Second, even with respect to OSSs for resold services, several development issues have not yet been negotiated to resolution and SWBT is still in the process of clarifying and supplementing its ordering and provisioning interface specifications. Even as this statement is being submitted, testing on certain pre-ordering, ordering, and provisioning interfaces have not been completed, and therefore, AT&T is not even in a position to advise the Commission on the adequacy of the test results. AT&T's experience in other jurisdictions suggests that the results will be dismal. Once testing is conducted and results are available, SWBT and AT&T must work jointly to address any problems shown from the testing. None of this has been accomplished. Therefore, at present, SWBT falls far short of the full implementation of its obligation to provide CLECs with reliable and nondiscriminatory electronic access to SWBT's OSS used in the provision of local service.

9. Finally, with respect to 911, E911, directory assistance, and operator call completion services, and white pages directory listings, I conclude that to date, SWBT has not

established any evidence of actual implementation of its obligations under Sections 271(c)(2)(B)(vii)(I)-(III) or 271(c)(2)(B)(iii) of the FTA. SWBT is required to do more than pledge it will meet the requirements; it must show actual implementation to meet these standards.

III. INTERCONNECTION AGREEMENT NEGOTIATIONS BETWEEN AT&T AND SWBT HAVE NOT YET RESULTED IN A COMPLETE AGREEMENT, MUCH LESS ONE THAT ENABLES AT&T TO COMPETE IN THE LOCAL EXCHANGE MARKET.

A. AT&T Organized the Negotiations and Diligently Pursued Comprehensive Interconnection Agreements.

10. AT&T began negotiations with SWBT on March 14. 1996. for the states of Texas. Missouri and Oklahoma, and on June 11, 1996 for the states of Kansas and Arkansas. Since March 14 1996, when AT&T requested SWBT to open interconnection agreement negotiations under the FTA, AT&T's objective has remained constant -- to negotiate with SWBT on a business-to-business basis to resolve all issues necessary for AT&T to provide local service to the consumers of each of the five states where SWBT operates as an incumbent LEC through Resale, UNE, and facilities-based entry methods. AT&T and SWBT agreed to negotiate common issues at a corporate level (one-time) as opposed to individually by state. These include such items as access to OSSs and use of electronic interfaces, UNEs, operator and directory assistance provisions, and white page listings. Virtually the only issues negotiated at the state level were those having to do with products and services available for Resale, pricing issues, and state-specific regulatory provisions. It was also AT&T's objective that as a result of these negotiations, AT&T would be able to offer customers

products and services that. at a minimum. are equivalent to the products and services and have at least the same level of quality that SWBT is able to offer. To date, that has not happened.

11. At AT&T's recommendation, the negotiations process was formed into a three-tiered negotiations management structure. The three-tier structure is described as follows:

1. *Subteam*. Multiple subteams were formed to negotiate technical requirements that envelop specific areas of expertise. For example, *electronic* interfaces for ordering, provisioning, repair/maintenance. billing (usage data transfer, local account maintenance. supplier billing); *special services* (e.g., directory listings, operator services, directory assistance. 9 11 /E9 11, erc.); *network* issues including areas such as network interconnection, unbundled network elements, local number portability, compensation. collocation, and poles, ducts, conduits, and rights-of-way (ROW).

   The subteams were responsible for negotiating the details related to the specific topics and AT&T's requirements. The AT&T subteam leads initiated the development of detailed matrices to document areas of agreement and disagreements reached at the subteam level and ensured that the agreements/disagreements were documented so that it represented the position of the joint AT&T and SWBT team. Areas of agreement were reviewed with the Core Team for approval and areas of disagreement were referred to the Core Team for additional negotiations.

2. Core *Team*. The Core Team was established to negotiate policy issues such as services available for resale, the extent of network unbundling, branding, routing of operator services and directory assistance calls, and pricing issues. In addition. the Core Team was responsible for approving the agreements reached at the subteam level for implementation and resolving areas that the subteams could not resolve. Disagreements that exist at the Core Team tier have also been documented via a matrix that summarizes each company's position. Agreements reached at this tier were considered final and did not require review by the Leadership Team.

3. *Leadership Team. The* Leadership Team was responsible for the final agreements centered around pricing, terms and conditions. The Leadership Team was the escalation point for unresolved issues referred to it by the Core Team.

12. AT&T and SWBT agreed to a set of milestones to prioritize and to guide work efforts. These milestones were used by the subteams and the Core Team as check points during negotiations. In addition, as mentioned previously, the subteams documented progress at a detailed requirements level by determining whether they had reached agreement or if they had reached the point of determining that they could not reach agreement. These matrices were reviewed with the Core Team for approval of agreement areas and for direction from the Core Team on the areas of disagreement. The matrix used by the Core Team to document areas of disagreement (unresolved issues) was maintained by both companies with each company responsible for maintaining its respective position. The disagreement matrices were used in the state arbitrations.

13. Throughout the negotiations, it was necessary for AT&T to drive the process to ensure that some progress was made. Examples of this include AT&T's insistence that milestones be developed to govern the work effort. SWBT's reluctance was continuously demonstrated through constant statements that the milestones were AT&T's milestones and not SWBT's. AT&T insisted on meeting at least two days per week at the core team level and more frequently at the subteam level, and AT&T prepared and provided to SWBT all meeting agendas, action item lists and tracking materials in advance of each meeting.

14. When asked to provide a list of products/services it would make available versus not make available to AT&T for Resale, SWBT told AT&T to look at its tariffs, without any indication

of its position on its various services across the five states. AT&T devoted hundreds of man hours to develop the matrices containing thousands of service entries per state. Only after AT&T's diligence. did it become clear what services that SWBT would or would not make available to AT&T under a Resale arrangement. Suffice it to say, it was not as simple as looking in SWBT`s tariffs or relying on SWBT's high-level list of services initially provided to AT&T.

15. Of course. a comprehensive agreement would have to provide access to SWBT`s UNEs, the critical bridge to facilities-based competition. As described in the Joint Statement of Steven Turner and Robert Falcone, UNEs create the opportunity for new entrants to differentiate their products and services from those of the incumbent LEC, without the need to immediately duplicate its entire network. UNEs should also provide the basis for competitive pricing offers' by new competitive local exchange carriers which Resale cannot. In order to create and execute a business plan for providing local service through UNEs, the new entrant must have a clear schedule of cost-based prices and must have the ability to combine the incumbent LEC's network elements to provide telephone service to the customer at least equal in quality to the service that the incumbent LEC can provide through those elements.

B. AT&T Has Sought Comprehensive Interconnection Agreements with SWBT.

16. Despite an extremely serious effort since March 14, 1996, AT&T has been able to conclude only one interconnection agreement with SWBT (in Texas). That agreement, filed only after several months of negotiations, an arbitration proceeding, and several weeks of post-arbitration negotiations and a 200-word disclaimer appended to SWBT's signature, became

effective January 21, 1997. After all that, the Texas agreement is still incomplete and the substantive UNE access, UNE OSS, UNE performance standards, and overall pricing issues remain unresolved. The UNE access, UNE OSS, UNE performance standards, and pricing issues are critical to enable AT&T to enter the local service market, provide competitive pricing, and facilitate a migration from a Resale environment to a facilities-based competitive environment. This Statement discusses Texas because it is the only state in which SWBT and AT&T have developed an Interconnection Agreement, as of this date. Because negotiations occurred at a corporate level and positions were consistent across all five states, the Texas experience is highly reflective of the experience in Oklahoma, and it is realistic to believe that these same issues will remain unresolved in Oklahoma.

17. Notwithstanding a Texas arbitration award that established AT&T's right to access all of the unbundled network elements individually or in combinations, without restrictions as ordered by the FCC, plus dark fiber and certain subloop elements, SWBT's corporate position differs substantially. [1] SWBT unilaterally has asserted a right not to provide OSS capabilities to provide UNE combinations in an unrestricted manner; has designed its internal processes to support UNE in such a way that the UNE OSS capabilities will be degraded in the areas of pre-ordering, installation, and repair/maintenance in comparison to both Resale and SWBT's treatment of itself, and has also asserted its right to impose UNE rates and charges and numerous other

[1] *Petition of AT& T Communications of the Southwest, Inc. for Compulsory Arbitration to Establish an Interconnection Agreement Between AT&T and Southwestern Bell Telephone Company, et* al., Docket Nos. 16226, *et al.,* Arbitration Award, issued November 7, 1996, at 7 (Texas Arbitration Award).

charges not recognized in the agreement, causing uncertainty over what elements and other provisions/capabilities are in fact available for purchase in Texas under the agreement, and at what prices. In addition, SWBT has opposed AT&T's ability to process "as is" orders and instead insists on a cumbersome process which will cause customers to be disconnected and experience longer installation or change intervals than Resale, even when there is no change to the physical serving arrangement. SWBT's operational plans for implementing UNE, as described in the Joint Statement of Steven Turner and Robert Falcone, will effectively lower the attractiveness of telephone service that may be offered through combinations of elements and stifle any practical ability to establish a competitive local service environment through the investment in and deployment of one's own facilities.

18. As AT&T's lead negotiator in these efforts, it is my judgment that the incompleteness of pricing terms, UNE access, UNE OSS capabilities, and UNE performance standards under the Texas contract is the direct result of SWBT's strategic approach to UNE negotiations. While many aspects of the Interconnection Agreement were the subject of months of subteam meetings conducted before, during, and after the arbitration, SWBT deferred any substantive negotiations on the subject of unbundled network elements until *after the* arbitration hearing had been completed. SWBT refused to discuss UNEs beyond the initial offer of five elements until the FCC Order was issued on August 8, 1996, and then insisted on focusing on element definitions before engaging in UNE OSS discussions, which did not begin until October 16, 1996. In addition, SWBT delayed pricing discussions until 7 days prior to the Texas contract

filing deadline. AT&T had requested pricing information and cost studies repeatedly since April 1996 and did not view it to be a prudent business practice to attempt to cram into 7 days something that should have been presented, discussed and negotiated over several months. SWBT's delay of pricing discussions and UNE negotiations has resulted in the establishment of continuing regulatory proceedings and cost proceedings. As a result of SWBT's delay of UNE access and UNE OSS discussions, there was not sufficient detail included within the arbitration to facilitate arbitration decisions that contained enough detail to move forward with implementation. In fact, it is a direct result of the broad and general arbitration award decisions that were rendered in Texas that introduced further delays in AT&T's ability to reach a complete and comprehensive interconnection agreement with SWBT. AT&T is now facing another round of negotiations (which SWBT insists run for another 135 days) and potentially an additional arbitration, for which the Texas Commission has already indicated its support, to address further disputes. SWBT's delay in negotiating UNE also required the parties to "resolve" a number of important contract issues through open-ended provisions that require joint action over the first several months of implementation -- e.g., definition of the parameters that will be measured to assure that the network elements SWBT provides to AT&T allow AT&T to provide a level of service to its own customers which is at least at parity with the local service SWBT provides its customers; development of ordering procedures for common-use elements, such as common transport, tandem switching, signaling and call-related databases; and development of ordering capabilities for customer-specific unbundled network elements. Again, these open-ended

provisions are so broad in nature that AT&T remains at the mercy of SWBT to ensure that implementation is facilitated in a timely manner and it is resolved in such a way that AT&T is able to serve its customers with. at a minimum, the same levels of quality that SWBT is able to provide its customers.

19. As a result, the Texas agreement provides no practical assurance of AT&T's ability to enter the local service market in the near term through UNE-based services. As described above, AT&T's experience has been that the written words of the Texas interconnection agreement are insufficient to demonstrate that SWBT is providing access to unbundled network elements on terms that are just, reasonable, and nondiscriminatory in that State.

20. Based on SWBT's corporate negotiating position, AT&T's experience with SWBT in Texas is directly relevant to SWBT's Section 271 application in Oklahoma. The SWBT/Brooks Fiber Communications of Oklahoma, Inc. and Brooks Fiber Communications of Tulsa, Inc. (Brooks) Oklahoma interconnection agreement and SWBT's Oklahoma Statement of Terms and Conditions (SGAT) are at best subject to the same pricing uncertainties and implementation problems that AT&T has encountered in Texas; they contain some provisions that more directly limit access to UNEs, as described in the Joint Statement of Steven Turner and Robert Falcone. Moreover, the Oklahoma agreement between AT&T and SWBT will have a significant bearing on the prices AT&T will incur for the agreement provisions, the degree of access to UNEs, UNE combinations, and the availability of OSS capabilities to support UNE that will be provided in Oklahoma. SWBT's Oklahoma interconnection agreements, and even the SGAT, contain "most

favored nation" clauses .[2] Some companies have opted to sign more limited contracts in order to enter business more quickly, relying on a most favored nation clause and the expectation that someone, such as AT&T, will negotiate a comprehensive interconnection agreement for more comprehensive terms. In my view, the degree of practical access to SWBT's UNEs available in Oklahoma really cannot be known until UNE purchases have begun. Of course, the contract terms of access to SWBT UNEs in Oklahoma themselves will not be known until AT&T and SWBT have presented an interconnection agreement to the Oklahoma Corporation Commission (Commission) and have received its approval.

21. AT&T continues to pursue contract negotiations with SWBT. I once had hoped that, after the Texas agreement was completed and final arbitration orders were entered in other states, the parties might come to some more general agreements, and negotiation of interconnection agreements in those states would be simplified. I cannot report that that is so. For the last several seeks, AT&T and SWBT negotiation teams have been meeting to develop an agreement to implement the Oklahoma AT&T Arbitration Order. Progress has been slow, with much of the same difficulty surrounding the UNE access, UNE OSS, and overall pricing issues.

22. AT&T will diligently pursue completion of an interconnection agreement with SWBT for the State of Oklahoma. However, I expect that the process of obtaining a comprehensive agreement for providing local service to AT&T customers through its access to

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[2] *See*. Oklahoma SGAT at § 25.16: Brook/SWBT Interconnection Agreement at Art. XXIV: Dobson Wireless, Inc. at Art. XXII; Western Oklahoma Long Distance (Resale) at An. XXIII; ICG Telecom Group, Inc. at § 29.16; Sterling International Funding & D/B/A Reconex (Resale) at Art. XXII; and US Long Distance, Inc. at Art. XXII.

unbundled network elements will prove as difficult with SWBT in Oklahoma as it has elsewhere and will result in: (1) an agreement that falls short of providing the capabilities necessary to purchase UNE combinations without severe end-user impacts and dissatisfaction, and (2) a delay in the development and deployment of facilities-based entry plans.

23. In my opinion, SWBT's strategy appears to be focused on making AT&T's UNE entry as late and ineffective as possible. Once SWBT obtains authority to provide interLATA service in Oklahoma, it can be expected to show even less than the minimal interest to date in concluding interconnection agreements that provide effective access to unbundled network elements. SWBT should not be allowed to enter into the interLATA market before it has completed an interconnection agreement with AT&T that the Commission approves, and before new entrants actually have the capabilities on a commercially operational bases to provide local service on a broad basis with a large volume of transactions.

Iv. PROVISION OF OPERATION SYSTEMS IS NOT COMPLETE.

A. Full, Efficient, and Effective Operational Support System Interfaces Are Needed by All CLECs for Resale and Unbundled Network Elements and Bold Incentives Must be Provided To Ensure that Electronic Interfaces Are Fully Operational.

1. OSS overview/background

24. Operation support systems (OSSs) are the computer-based systems and databases that telecommunications carriers use for a number of vital customer-oriented and business support functions. These systems support a variety of carrier interactions with customers, including those related to: *pre-ordering* activities, such as determining the customer's existing service, verifying

the customer service address, determining services and features available to the customer at the service address, assigning telephone numbers, establishing a due date for service installation, scheduling a dispatch when necessary, and determining the long distance carrier choices available for the customer's address; *ordering* services, such as the determination of services and features a customer wants, understanding the way a customer wants his or her directory listing to appear in the directory assistance bureaus and white pages, subscribing the customer to an IXC, defining customer blocking requirements, e.g., 900, collect; *provisioning* of service, the actual installation of new service or change of competitive local exchange carriers; *repair and maintenance*, and *billing* for service. These systems also provide the information and data used by a carrier's representatives. The availability, accuracy, timeliness, and completeness of information used and maintained by OSSs are critical to a carrier's efforts to satisfy its customers.

25. AT&T, like all CLECs, requires the ability for its OSSs to communicate with the incumbent LEC's OSSs, whether AT&T is reselling the incumbent LEC's services or using unbundled network elements. AT&T will communicate with the systems of the incumbent LEC through electronic "interfaces" and "gateways."

26. An "interface" is a pathway that enables access to information and functionalities that is maintained in a system or database. An interface can also be a pathway that is used to deliver information from a system or database to another system or to a system user. These interfaces will provide AT&T access to SWBT's data sources which will enable it to conduct pre-ordering discussions with its customers and to order, provision, repair, maintain, and bill

customers for local services. In the area of billing, operational interfaces must include local account maintenance, transfer of usage data needed for end user and other contract billing purposes, by SWBT for resold services and unbundled network elements.

27. Interfaces to operational support systems must be electronic. Electronic interfaces are those that rely on computer and telecommunications technology to provide information. Electronic interfaces create the opportunity to have computer systems interact with each other, without the need for human involvement. For new entrants to be competitive with SWBT, they must have nondiscriminatory access to SWBT's OSSs, which require the ability to communicate electronically on a "real time" basis directly with SWBT. For AT&T to provide service that is. at a minimum, equivalent to what SWBT provides to its customers, the interfaces must be electronic and the service intervals for items such as installation, repair and maintenance must be, at a minimum, the same to allow service to appear seamless to the end user. The FCC recognized the need for electronic interfaces in its First Report and Order .[3]

28. A "gateway" is a programmed system that interprets the content of an electronic message and directs the message to a particular database or processing location, depending on the message content. The gateway then serves as the ongoing electronic interface between the systems and the databases that contain the stored information. In this way, the gateway performs the functions of formatting, translating, validating, and routing information between the CLEC's and the incumbent LEC's systems and databases.

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[3] *In the Matter of Implementation of the Local Competition Provision of the Telecommunications Act of* 1996, CC Docket No. 96-98 (rel. August 8. 1996) (First Report and Order), ¶ 525.

2. Full, efficient, and complete OSSs are essential.

29. Because the reliability of support systems is essential to providing and maintaining service to end-users, the design characteristics for these systems are extremely important to AT&T. Support systems that fail to support users create customer dissatisfaction, and systems that are unreliable in terms of responsiveness or accuracy undermine AT&T's best efforts to ensure customers get the services they request when they request them. Quite simply, no carrier competing with meaningful volumes, including AT&T, can conduct its business effectively or efficiently without error-free, and well-designed, electronic interfaces. Customers will be directly interfacing with AT&T for services and will be receiving an AT&T bill for service, and accordingly, AT&T must provide assured and consistent service quality at least equal to the quality they experience with their current SWBT local service. In short, as a new competitor in the local exchange market, AT&T must provide customers with a positive experience.

30. Indeed, for this reason, AT&T has focused much of its efforts on ensuring that access to operations support systems, and operations support system interfaces are capable of handling large volumes of transactions on a real-time basis. Accordingly, all systems and procedures must be operational with the tested ability to handle significant volumes, and with response times that are at least comparable to what the incumbent LEC provides its customers, before AT&T can begin to offer its services generally in the marketplace. AT&T has continuously provided SWBT with its OSS requirements to ensure quality is at least comparable to what SWBT provides its customers since March 26, 1996, in varying levels of detail. Yet,

even today. SWBT and AT&T have significant disputes regarding the current status of SWBT's implementation of OSS capabilities and interfaces that will facilitate competitive market entry.

31. It is critically important that the interfaces provide nondiscriminatory access to SWBT's OSSs for the short and long term, rather than requiring CLECs to rely on incumbent LEC proprietary operation support systems which were not designed for use by a carrier other than SWBT and as a result do not provide access that is nondiscriminatory. It is disadvantageous for a new carrier to rely exclusively on an incumbent LEC's proprietary OSSs for electronic interfaces, As I will explain in more detail in Paragraphs 85 through 92, reliance on incumbent LEC proprietary systems will not support UNE and in a Resale environment will cause limitations in service offerings, use of numerous systems, manual processing, redundancy of work steps, and a higher risk of errors. In addition, reliance on such systems places new carriers, such as AT&T, in a position of complete dependency on SWBT's OSS capabilities. For example, the new entrant will find itself at the mercy of the incumbent LEC's hours of operation (unlike SWBT. AT&T intends to operate on a 7 day per week, 24 hour per day basis to service the needs of its customers), maintenance schedules, outage problems, and control. Because so much of the information required by competitors resides exclusively in SWBT's OSS, SWBT is in an advantageous position to control the ability of its competitors to enter the local service market and become an effective competitor.

32. AT&T's need for nondiscriminatory access to SWBT's OSS is both more imperative and more complex than the needs of small start-up CLECs entering the market on a

more limited or narrowly-focused basis. A small CLEC has none or few existing customers. and thus typically enters a local market without having had to develop an advanced electronic interface that provides nondiscriminatory access to the underlying SWBT operations support systems. Lacking both a preexisting customer base and a reputation for meeting the demands of large numbers of customers with high levels of service quality, a small CLEC has the option to enter the market without the availability of electronic interfaces to OSSs.

33. In contrast, a large CLEC like AT&T has a large pre-existing customer base that is already being served through use of advanced OSSs. In order to maintain its reputation in the market for providing quality service to its customers, AT&T must be prepared from the outset to serve large numbers of customers and to process orders of all levels of complexity. Because meaningful competition with SWBT can only come, at least in the next few years, from large potential competitors, any failure by SWBT to makes its OSSs readily accessible in a manner that is nondiscriminatory to large potential competitors like AT&T will delay the creation of a competitive local market. In all events, Congress has required SWBT and other incumbent LECs to provide nondiscriminatory access to all OSSs and the FCC has found that it is "absolutely necessary" for competitive carriers to have access to these systems. FCC Order, ¶ 521.

B. Complete, Full, and Effective Implementation of Operations Support Systems Does Not Occur Overnight, Particularly with SWBT.

34. As I will discuss generally here, and in more detail in Paragraphs 41 through 52, SWBT cannot claim that it is commercially provisioning OSSs when it has not even reached the state of operational readiness.

35. Operational readiness is the end state of a systems *development* effort. It is achieved when the systems are providing useful, reliable results, in accordance with their proposed function and design. Leading up to operational readiness are seven stages -- detailed interface negotiations, systems impact, systems requirements definition and specification development, systems development, system testing, inter-system testing and operational readiness testing. *Currently, the availability of SWBT's electronic interfaces are in the detailed interface negotiations stage for UNE and the systems impact and systems requirements definition and specification development stages for Resale.*

36. An interface between two systems is operationally ready when the two systems are working *together* satisfactorily to deliver the capabilities for which they are designed. Operational readiness cannot simply be unilaterally declared by SWBT (or for that matter, AT&T) because each firm is only one end of the interface. Both ends must work together to establish that the interfaces are operationally ready. While SWBT may boast about its early developmental work for electronic interfaces that it began in the third and fourth quarters of 1995, the boast is misplaced. In fact, AT&T does not believe that SWBT solicited input from any large CLEC requiring electronic interfaces to support large volumes of transactions during the early developmental stages of its OSS design.

37. Indeed, SWBT's unilateral approach to the development of electronic interfaces underscores the need for input. SWBT's approach resulted in the presentation of a competitively and statutorily insufficient manual process **(not** electronic) on or about April 1, 1996. After the

presentation was made, AT&T advised SWBT that as a result of its experiences with manual interfaces through its Rochester trial, which clearly demonstrated that nondiscriminatory access to OSSs cannot be achieved using manual interfaces, AT&T would not consider manual interfaces with SWBT. SWBT then shared its plans with AT&T that it had scheduled modifications to its own proprietary, ordering/provisioning and repair/maintenance systems for use by CLECs, as opposed to designing and implementing interfaces to its internal systems/processes that would provide nondiscriminatory access to its OSSs. During this time frame, AT&T articulated its requirements for electronic interfaces to SWBT's OSSs, as opposed to manual interfaces or its use of SWBT's proprietary systems. Further, AT&T emphasized the fact that service parity must not be assessed from the perspective of how SWBT treats all CLECs, but must be assessed by comparing how SWBT is able to serve its customers versus how CLECs are able to service their customers.

38. In the SWBT territory, however, there is only one supplier of the information needed to provide local telephone service to customers -- SWBT. As I will show below, SWBT has not provided the level of cooperation that would be typical of a relationship where each party has an incentive to work together, and the assistance it has provided has not been sufficient to permit AT&T, or any other CLEC, to gain access to SWBT's OSSs at parity to what SWBT now enjoys for the support of its own retail customers.

39. If SWBT does not implement electronic interfaces, SWBT's monopoly control over the OSSs that perform the essential ordering, provisioning, repair, maintenance, and billing for

its services will be as formidable an obstacle to entry as its control over the local networks themselves. Indeed, as I described earlier, SWBT, through its negotiation posture has significantly affected AT&T's entry into the market. If SWBT is allowed to make it harder for customers to order and to receive service from CLECs than from SWBT, CLECs cannot be viable competitors in the local exchange market.

40. With this Overview of the complex nature of OSS, electronic interfaces, and gateways, I will now discuss the OSS implementation stages and where SWBT is within those stages for UNE and Resale.

1. The development of OSS interfaces and gateways takes time and requires mutual effort to complete the 7 basic stages. AT&T and SWBT are still in the early phases of development.

41. The development of operationally ready electronic interfaces between two operations support systems is an extremely complex and difficult undertaking, which requires not only a considerable period of time, but also the completion of deployment and testing to ensure accurate, reliable, and timely communications between the two entities. A systems development effort of the magnitude required to support the OSS functions of pre-ordering, ordering, provisioning, repair, maintenance, and billing requires seven stages. If any of these steps is skipped or abbreviated, serious problems between the entities are likely to arise, such as orders being rejected as has in fact occurred repeatedly in AT&T's efforts to enable its OSSs to interface with other incumbent LECs. The following is a description of each of the seven stages and identification of each stage that SWBT and AT&T are at with respect to OSSs.

42. Interface Negotiations Stage 1 -- In the interface negotiations stage, the goals necessary for implementation are analyzed and negotiated in a level of detail to define specific processing needs at the transactional level. Determination of the business functions that the interfaces and underlying systems must address are made as well as preliminary decisions as to which are to be computerized and which require manual processes or support. The business needs drive the interface and overall systems analysis which inevitably require resolution of questions concerning what business rules apply, what data definitions apply, definitions of the conditions under which information is required or optional, and whether information must be obtained from databases, supplied by customers, validated, or accepted as is. Hundreds of questions regarding the definitions and the ways data are used in the systems are the norm, not the exception. These questions are ordinarily reviewed with the suppliers of the input and output transactions. As of this date, AT&T is currently in this stage of the process for UNEs with the SWBT five-state OSS interfaces.

43. Systems Impact Stage 2 -- During the systems impact stage, the interface negotiations agreements are assessed to determine what and how existing systems, architectural designs and interfaces will be impacted and how long it will take for coding and development to be completed. This stage determines what systems and interfaces require development to implement the negotiated agreements. As a result of recent closure on critical negotiations issues, some aspects of Resale remain in this stage, with development timelines not yet fully defined to

understand system and interface availability dates. Some of the critical issues that were recently closed for systems impact analysis are described in Paragraph 61.

44. Within this stage, the overall result is a comprehensive system and interface design that takes into consideration the technical environment for the systems, the specific regional or local exceptions, the daily/weekly/monthly processing issues to be addressed, and more. The system will be broken down into modules that are logical components for computer processing or manual methods and procedures development.

45. Systems design is particularly complicated. Knowledge of the technical specifications of the interface is not enough for effective communications and interactions between systems. A knowledge of the "business rules" or business practices and procedures programmed into the preexisting systems is also required. For example, it is necessary that AT&T understand SWBT's existing service order format and the numerous edits it will perform on an order it receives from AT&T. In order to design its systems to communicate with SWBT in a manner whereby orders will not be rejected because fields are not populated in accordance with SWBT's edits, it is not enough to know that a 4-digit field has been provided for the primary interexchange carrier or "PIC" code; a list of the valid PIC codes assigned and used in the incumbent LEC's systems must also be provided. The majority of the systems/interface work required for Resale is in this stage of the process for the AT&T and SWBT five-state OSS interfaces.

46. Systems Requirements Definition and Specification Development Stage 3 -- In this stage, the details and definitions defined through the interface negotiations are documented

through a series of system and interface requirements and specifications are developed for each of the systems and interfaces impacted. These requirements and specifications will be used by the programmers to actually write and execute code to make modifications to existing systems. architectural designs and to develop new systems and interfaces as deemed necessary through the systems impact phase. The need for modification to or development of new requirements and specifications may arise at any stage of the process. For example, for the Electronic Data Interface (EDI) to be developed in support of ordering and provisioning, it has taken several months to complete the interface negotiations surrounding the field-to-field mapping necessary to support the transmittal of simple residential single-line orders for new customers with all components, e.g. , services and features, directory listing information, etc. The process of requirements definition and specification development can take several iterations before the parties find that all questions are resolved and no further definition of the requirements or specification are required. Specifications are only considered final when systems can be built to those specifications to provide useful, reliable results in accordance with their function and design.

47. System Development Stage 4 -- Once the interface is designed, the systems requirements are defined, and specifications developed, the actual systems development (programrning) can begin. Systems development is where programmers and data base developers code the systems and database modifications. This stage also includes the manual activities required to develop methods and procedures and training. Analysts work with job or task designers to place the manual activities into logical sequences. These efforts result in the design

of forms, screen, and reports. The merging of computerized modules and manual procedures are then followed by testing that is best accomplished through a structured and disciplined controlled environment. As previously mentioned, as of this date, AT&T and SWBT are currently in the interface negotiations stage for UNE and the system impact/specification development stage for the ordering/provisioning interface for Resale and have not begun systems development work necessary to address the critical issues that have very recently been resolved. Although all of the OSSs and interfaces are important, the ordering/provisioning interface is the most critical interface required to provide local service to customers since even the smallest of errors could cause the order to reject or the service to be provisioned incorrectly. Both of these outcomes will cause rework and customer dissatisfaction.

48. System Testing Phases 5, 6 and 7 -- System testing is actually performed in three stages. The first is the internal company system testing. In this stage, the purpose of testing is to confirm that the design and programming that has been completed is correct. It is important to validate the construction and development of the individual modules, the programs which comprise many modules, the systems that comprise many programs. This stage of testing serves to demonstrate that the system components perform in accordance to the system design, requirements and specifications, on an individual basis.

49. The next stage of testing is the inter-system testing which is necessary to assure that both ends of the interfaces can effectively communicate and facilitate the interaction of the OSSs

of both entities in accordance with the design, requirements, and specifications on an integrated basis.

50. The last stage of testing is the operational readiness testing (ORT) stage which is performed prior to implementation. During the ORT stage, a production environment is simulated to test the entire spectrum of systems interactions without adversely affecting actual customers in the marketplace. Operational readiness testing enables the parties to identify problems or inadequacies in the systems or interface design or interface specifications on an end-to-end integrated basis. During this stage, early warning signs can be identified with respect to potential capacity or volume constraint issues that may be experienced after implementation. The ORT also includes the testing of methods and procedures materials and the training of personnel to be certain that the personnel of each entity can operate the systems and/or interfaces, fully understand and interact with the information presented on a screen, address exception processes, and be able to gamer other critical information to make the interfaces viable.

51. Only after all of these steps have been completed, and final system modifications are made and tested to address inadequacies identified through the three testing stages, can the systems and interfaces be implemented. *Only* when implementation has been successfully completed, can it properly be said that the systems are operationally ready.

52. The importance of understanding each development stage necessary for operational readiness is to provide the Commission with a big picture of the complexity of the task and where AT&T and SWBT are currently in the process, i.e., stage 1 of 7 for UNE and stages 2 and 3 of

7 for Resale. It should become clear from the discussion above, that operational readiness can only be achieved after both AT&T and SWBT have worked jointly in each stage. Based on AT&T's experience to date, this process can easily take six months or more following the definition of stable requirements and development of systems/interface specifications. It is only after the final steps have been taken will SWBT have operationally ready OSS interfaces. And it is only then that the Commission should even begin to consider whether SWBT has complied with the requirements under Section 271.

2. AT&T and SWBT have reached **a conceptual agreement as to the types of interfaces to be developed, but there are severe deficiencies in SWBT's provision of nondiscriminatory access to its OSSs.**

53. AT&T pursued the issue of access to OSSs, interfaces and gateways aggressively, seeking SWBT's agreement that it would work with AT&T to implement electronic interfaces necessary to provide nondiscriminatory access to SWBT's OSSs. AT&T and SWBT agreed to pursue these interfaces in May 1996, and recognized that manual interfaces and/or the use of SWBT proprietary systems would not be appropriate.

54. From the time that AT&T and SWBT engaged in negotiations, the parties agreed to conduct the OSS interface negotiations on a SWBT five-state basis as opposed to a state-by-state basis. Although there may be intricacies or differences in some of the products and services that can be ordered state-to-state, the OSSs and interfaces SWBT would develop and implement with AT&T would be a common set of OSSs and interfaces for its five-state geography. Given the Overview of the complexity of the OSS interfaces and the interplay amongst them, the following